

SOME COLLEMBOLA RECORDS FOR THE PACIFIC COAST AND A DESCRIPTION OF A NEW SPECIES

DAVID B. SCOTT, JR.
Portland, Oregon

This paper covers collection records of Collembola by the author during the past six years. The records for Oregon are incomplete but should be enlarged upon later when it is hoped that a more complete survey of Pacific Coast Collembola may be presented.

The springtail fauna of California, Oregon, and Washington is remarkably varied, extending from more or less subtropical forms to subarctic species. Literature on the Pacific Slope species is limited principally to papers by Schött, Bacon, Mills, Folsom, and a previous one by this author. An attempt has been made to include a fairly complete bibliography pertinent to the Collembola of this region.

The taxonomic system adopted here generally follows that employed by Börner (1905) and Mills (1934).

Suborder ARTHROPLEONA

Family PODURIDAE

Subfamily ACHORUTINAE

Achorutes armatus (Nicolet) 1841. Taken under boards, in moss, on stagnant water, on decaying oranges, and in greenhouses. California: Altadena, Jan.-Mar.; Montebello, Mar.; Santa Ana Canyon, Nov.; Oxnard, November.

Achorutes pseudarmatus Folsom 1916. Taken in gills of mushrooms and in moss and leaves. California: Altadena, Feb.; Washington: Snoqualmie Pass, May; Mt. Rainier, July; Wenatchee, May.

Achorutes brevispinus Harvey 1893. Under weed piles. California: Artesia, April.

Xenylla welchi Folsom 1916. On rain pools. Oregon: Portland, March.

Subfamily NEANURINAE

Tribe PSEUDACHORUTINI

Odontella ewingi Folsom 1916 (= *Xenylla helena* Scott 1937). Taken in fungus growth under bark of dead alder. This species, erroneously ascribed by the author in a previous paper to the genus *Xenylla*, was later discovered to be synonymous with the above. California: Angeles Crest, Los Angeles County, March.

Tribe NEANURINI

Morulina gigantea (Tullberg) 1876. In damp leaves under ferns. The definite record of this species at this time verifies several predictions that this very large Collembolan occurs in the Pacific Northwest. The only genuine record thus far for the Pacific Coast had been made by Folsom in Alaska. Oregon: Portland, May 15.

Neanura muscorum (Templeton) 1835. In damp leaves. California: Arroyo Seco, March and November.

Subfamily ONYCHIURINAE

Onychiurus fimetarius (Linnaeus) 1767. In damp leaves and in greenhouses. California: Altadena, Jan.-Mar.; Montebello, March.

Onychiurus armatus (Tullberg) 1869. In moss and damp leaves. Washington: Tacoma, April.

Onychiurus cocklei (Folsom) 1908. In deep moss and under stones. Washington: Mt. Rainier, July.

Tullbergia iowensis Mills 1932. Under damp boards. Oregon: Linnton, March.

Tullbergia collis Bacon 1914. Taken in deeply buried debris under rocks. California: Arroyo Seco (Los Angeles County), March.

Family ENTOMOBRYIDAE

Subfamily ISOTOMINAE

Folsomia guthrei (Linnaniemi) 1912. In damp leaves. California: Altadena, February.

- Folsomia fimetaria* (Linnaeus) 1758. On underground drain water. California: Altadena, January.
- Agrenia bidenticulata* (Tullberg) 1876. Taken in only one locality in damp moss at 6000 feet altitude. Washington: Stemilt Creek (Chelan County), June.
- Proisotoma immersa* (Folsom) 1924. Under damp bark. California: Arroyo Seco (Los Angeles County), April.
- Proisotoma aquae* (Bacon) 1914. On rain pools, in damp moss, and in leaves. California: Altadena, Jan.-Feb.; San Pedro, Feb.; Ontario, Oct.; San Antonio Canyon, Nov.; Santa Ana Canyon, Nov. Oregon: Portland, Feb.-March.
- Proisotoma rainieri* Folsom 1937. On surface of snow. Washington: Mt. Rainier, August.
- Isotomurus palustris* (Müller) 1776. On stagnant water. California: Altadena, Feb.-March.
- Isotoma (Vertagopus) cinerea* (Nicolet) 1841. In pine needles. Washington: Blewett Pass, May.
- Isotoma (Vertagopus) arborea* (Linnaeus) 1758. Taken under the loose bark of dead pine trees. California: Summit of Mt. Diablo (Contra Costa County), March.
- Isotoma (Pseudisotoma) sensibilis* Tullberg 1876. Under damp bark and in moss. California: Mt. Hamilton, Feb. Oregon: Portland, Feb.-March. Washington: Stehekin Valley, Sept.; Tacoma, April.
- Isotoma viridis* Bourlet 1839. Taken under the bark of trees, under boards and rocks, in leaves and moss, and in greenhouses. California: Altadena, Jan.; Idyllwild, Mar.; Santa Ana Canyon, Nov.; Mt. Wilson, Oct.-Nov.; Montebello, Mar. Washington: Wenatchee, May; Rock Island, November.
- Isotoma viridis* Bourlet var. *delta* Macgillivray 1896. Under bark of dead pine. California: San Antonio Canyon, November.
- Isotoma viridis* Bourlet var. *catena* Guthrie 1903. In damp leaves. Washington: Blewett Pass, May.
- Isotoma gelida* Folsom 1937. Under rocks along river banks and in moss. Oregon: Portland, February. Washington: Wenatchee, October.
- Isotoma olivacea* Tullberg 1871. In moss. Washington: Mt. Rainier, August.

Subfamily ENTOMOBRYINAE

Tribe ENTOMOBRYINI

Sinella curviseta Brook 1882. Under damp bark. California: Stanford University, February.

Sinella höfti Schäffer 1890. On surface of underground drain water. California: Altadena, January.

Sinella binocolata (Schött) 1896. Under logs and rotten wood. California: Madroñe Hot Springs, April; Stanford University, Oct.; Altadena, Mar.; Mt. Wilson, November.

Sinella sexoculata (Schött) 1896. Under damp bark. California: San Antonio Canyon, Feb.-Nov.; Arroyo Seco, Jan.-Mar. Washington: Tacoma, April.

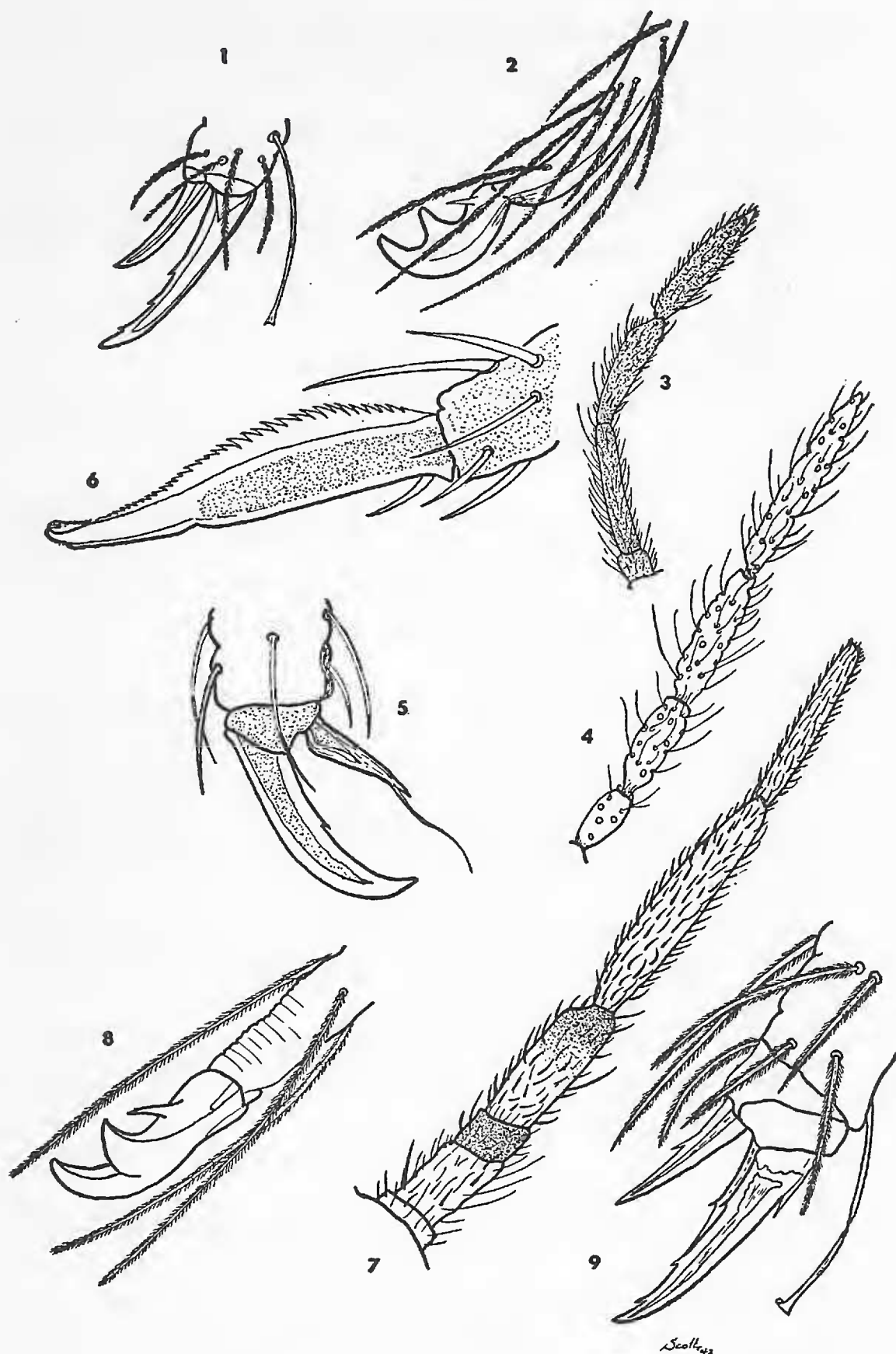
***Entomobrya cyanica* Scott, new species**

(Figs. 1-3)

Color: Entirely a cyanic blue except for lemon-yellow tibiotarsi, a striking yellow dorso-lateral saddle on mesonotum, and unpigmented dentes. The anterior and posterior margins of head also tend to be tinged with yellow. Antennae (fig. 3) robust, about 3 times the length of head. Segments in relative lengths as 4:14:16:18. Body thickly clothed with clavate hairs. Eyes—16. Unguis (fig. 1) typically entomobryan with a pair of basal lateral teeth and two or sometimes three pairs of inner teeth. Unguiculus unarmed. Tenent hair slightly longer than unguis. Dentes about one-fifth longer than manubrium. The coarse dorsal crenulations on dentes end at a distance from apex of about 3 times the length of mucrones. Mucrones (fig. 2) with two teeth and a basal spine. Length, 1.5 mm.

This species is so distinct in coloration that no comparison is possible with any forms known to the author. Taken under the bark of dead alder in March. Only five specimens were found over a five-year period. Type specimens are in the author's collection until such a time as they can be placed in the California Academy of Sciences. Type locality: ARROYO SECO, LOS ANGELES COUNTY, CALIFORNIA.

Entomobrya multifasciata (Tullberg) 1871. In damp leaves, in moss, and under bark. California: Mt. Diablo, Jan.-Mar.; Stanford University, Jan.; Altadena, Jan.-June; San Antonio Canyon, Feb.; Artesia, Mar. Oregon: Portland, Mar.; Troutdale, February.



Figures 1-3, *Entomobrya cyanica* Scott, n. sp.: 1, left forefoot; 2, right mucro; 3, antenna. Figures 4-6, *Sminthurides* (*Denisella*) *sexpinnatus* Denis: 4, antenna; 5, left forefoot; 6, right mucro. Figures 7-9, *Orchesella cincta* (Linnaeus): 7, antenna; 8, right mucro; 9, right midfoot.

- Entomobrya marginata* (Tullberg) 1871. In moss and under logs. Washington: Tacoma, April; Blewett Pass, May; Wenatchee, May-June.
- Entomobrya griseo-olivata* (Packard) 1873. Under logs. Washington: Blewett Pass, May.
- Entomobrya clitellaria* Guthrie 1903. On stagnant water, under bark, and in damp leaves. California: Altadena, Feb.; Stanford University, Jan.; San Pedro, March.
- Entomobrya purpurascens* (Packard) 1872. Inside chili peppers attacked by pepper weevils and under strawberry vines, moss, and leaves. California: Artesia, Oct.; Downey, July; San Pedro, April. Oregon: Portland, Feb. Washington: Wenatchee, April.
- Entomobrya suzannae* Scott 1937. Taken under bark of damp, rotten logs. California: Alpine Creek, Nov.; Stevens Creek (Santa Cruz Mts.), Dec.; Calaveras Reservoir, February.
- Entomobrya atrocincta* Schött 1896. In damp leaves. Washington: Pullman, April.
- Entomobrya washingtonia* Mills 1935. Taken under damp bark, in dead leaves, in moss, and under rocks. California: San Antonio Canyon, Feb.; Arroyo Seco, Feb.; Calaveras Res. (Santa Clara County), Feb. Oregon: Portland, Feb. Washington: Tacoma, April; Wenatchee, May; Stehekin Valley, July.
- Drepanura californica* Schött 1891. Under damp bark. California: Altadena, Jan.; Arroyo Seco, Jan.; Madroñe Hot Springs, April.
- Sira domestica* (Nicolet) 1841. Taken in dry surroundings under bark of trees and in leaves. California: Stanford Univ., Nov.-April; Altadena, June.
- Sira buski* Lubbock 1869. Under damp leaves. Washington: Wenatchee, May-September.
- Lepidocyrtus curvicollis* Bourlet 1839. In moss. Oregon: Portland, February.
- Lepidocyrtus purpureus* Lubbock 1873. In damp leaves. California: Altadena, Jan.-Mar. Washington: Stehekin Valley, July.
- Lepidocyrtus cyaneus* Tullberg var. *cinereus* Folsom 1924. In moss. Oregon: Portland, January.
- Pseudosinella octopunctata* Börner 1901. In damp leaves. California: Santa Ana Canyon, November.

Pseudosinella sexoculata Schött 1902. Under damp bark and manure. California: Altadena, Jan.-Mar. Washington: Wenatchee, September.

Pseudosinella decemoculata (Guthrie) 1903. Under leaves and in damp wood frass. California: Altadena, Jan.-Mar.; Arroyo Seco, Jan.-March.

Pseudosinella violenta (Folsom) 1924. In damp leaves and soil. California: Altadena, Oct.-March.

Tribe ORCHESELLINI

Orchesella cincta (Linnaeus) 1758. (Figs. 7-9). In moss. Oregon: Portland, January.

Subfamily TOMOCERINAE

Tomocerus vulgaris (Tullberg) 1871. In leaves, under damp boards, and under bark. California: Alpine Creek (Santa Cruz Mts.), April, and October. Washington: Wenatchee, June and October.

Tomocerus flavescens (Tullberg) 1871. Under damp bark. California: Alpine Creek (Santa Cruz Mts.), April. Oregon: Portland, January.

Tomocerus flavescens (Tullberg) var. *americanus* Schött 1896. In moss, under bark, and under rocks. California: Arroyo Seco, Mar. Washington: Stemilt Creek, July; Mt. Rainier, Aug.; Rock Island, Oct.; Stehekin Valley, July-October; Blewett Pass, May.

Tomocerus flavescens (Tullberg) var. *arcticus* Schött 1894. In moss and under bark. California: Madroñe Hot Springs, April. Oregon: Portland, Feb. Washington: Wenatchee, May; Rock Island, Oct.; Mt. Rainier, Aug.; Tacoma, April.

Tomocerus bidentatus Folsom 1913. Under bark of redwood stumps. California: Big Basin (Santa Cruz Mts.), February.

Suborder SYMPHYPLEONA

Family SMINTHURIDAE

Subfamily SMINTHURIDINAE

Sminthurides (Denisiella) sexpinnatus Denis 1931. (Figs. 4-6). This unusual species has never been previously recorded in

- North America. The colors of the specimens at hand vary somewhat from Denis' description. Taken on the surface of still, clear water of fish ponds. California: Altadena, March.
- Arrhopalites caecus* (Tullberg) 1871. Taken under damp bark of dead trees. Not common. California: Stanford Univ., Feb.; Altadena, February.
- Sminthurinus aureus* (Lubbock) 1862. In moss and on stagnant water. California: Arroyo Seco, Feb.; Altadena, February.
- Sminthurinus elegans* (Fitch) 1863. This species, so well described by Folsom (1934), is probably the same referred to by Gervais and Lubbock as *S. bourletii*. It was taken on the surface of stagnant water and in damp leaves. California: Altadena, Dec.-Mar.; Santa Ana Canyon, November.
- Sminthurinus niger* (Lubbock) 1867. In damp leaves and under damp bark. California: Big Basin, Feb.; Altadena, March.
- Sminthurinus quadrimaculatus* (Ryder) 1879. Under damp boards. California: Altadena, February.
- Sminthurinus remotus* (Folsom) 1896. On stagnant water. California: Altadena, Feb.-March.

Subfamily SMINTHURINAE

- Bourletiella hortensis* (Fitch) 1863. On stagnant water. California: Altadena, March.
- Sminthurus fuscus* (Linnaeus) 1746. Under damp boards, under bark, and in damp leaves. California: Altadena, Jan.; Santa Ana Canyon, Nov.; San Antonio Canyon, December.

Subfamily DICYRTOMINAE

- Ptenothrix maculosa* (Schött) 1891. A very common species in damp situations such as under boards, damp leaves, moss, in gills of mushrooms, and on the surface of stagnant water. California: Altadena, Dec.-Mar.; Alpine Creek, Dec.; Stanford Univ., Dec.; Mt. Wilson, Nov.; San Antonio Canyon, Nov. Oregon: Portland, Feb.-March.
- Ptenothrix olympia* (MacGillivray) 1894. Taken in damp moss and pine needles. California: Stanford Univ., Dec. Oregon: Portland, Feb.-April. Washington: Tacoma, April; Blewett Pass, May.
- Ptenothrix vittata* (Folsom) 1896. On flower pots in greenhouses. California: Montebello, March.

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